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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,676	11/13/2003	Nam Soo Cho	2080-3-195	9071
35884 7590 07/27/2007 LEE, HONG, DEGERMAN, KANG & SCHMADEKA 660 S. FIGUEROA STREET Suite 2300 LOS ANGELES, CA 90017			EXAMINER LEO, LEONARD R	
			ART UNIT 3744	PAPER NUMBER
			MAIL DATE 07/27/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/712,676

Applicant(s)

CHO ET AL.

Examiner

Leonard R. Leo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The amendment filed on May 5, 2006 has been entered. Claims 7-10 are cancelled, and claims 1-6 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Scott. It has been held that the term "integral" is sufficiently broad to embrace constructions united by such means as fastening and welding. *In re Hotte*, 177 USPQ 326, 328 (CCPA 1973). In this respect, Scott (page 2, lines 8-16) discloses the heat exchanger is sweated (i.e. soldered) in the final assembly. Regarding claims 2 and 6, Scott (page 1, lines 62-71) discloses support holders 12, 13 with slots 16.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Kadle. It has been held that the term "integral" is sufficiently broad to embrace constructions united by such means as fastening and welding. *In re Hotte*, 177 USPQ 326, 328 (CCPA 1973). In this respect, Kadle (column 2, lines 30-32) discloses the fins 14 are brazed to the tubes 10. Regarding claim 2, Kadle discloses support holders 12. Regarding claim 3, Kadle (column 2, lines 13-30) discloses the fins 14 and tubes 10 are composed of aluminum.

Claims 1, 3 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoshino et al. It has been held that the term "integral" is sufficiently broad to embrace constructions united

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by such means as fastening and welding. *In re Hotte*, 177 USPQ 326, 328 (CCPA 1973). In this respect, Hoshino et al (column 5, lines 22-26) discloses the fins 12 are brazed to the tubes 11. Regarding claim 3, Hoshino et al (column 1, lines 12-15) discloses the heat exchanger, i.e. condenser is composed of aluminum, including fins, tubes and headers. Regarding claim 5, Hoshino et al discloses fins 12 have louvers 12a, which by definition are slits angled from the plane of the fin. Furthermore, the functional recitation "to smoothly discharge condensate water and for a smooth contact with air" has not been given patentable weight because it is narrative in form. In order to be given patentable weight, a functional recitation must be expressed as a "means" for performing the specified function, as set forth in 35 U.S.C. 112, 6th paragraph, and must be supported by recitation in the claim of sufficient structure to warrant the presence of the functional language. *In re Fuller*, 1929 C.D. 172; 388 O.G. 279.

Response to Arguments

The objection to claim 1 is withdrawn in view of the claim amendment.

Applicant's arguments have been fully considered but they are not persuasive.

The Examiner disagrees with applicants' remarks with respect to Scott. Applicants states "*Scott fails to disclose or suggest a heat exchanger having cooling fins formed at a right angle to a longitudinal direction of the refrigerant pipes.*" However, applicants further state, "*Scott discloses a heat exchanger having flat fins formed horizontal to a longitudinal direction, **which is not the same as a fin formed at right angle.***" Applicants' last statement is partially correct, the latter in bold type being incorrect. Figure 1 of Scott discloses flat fins 18 formed in a horizontal direction with respect to the pipes of the coil 10 extending in a vertical direction. The

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horizontal and vertical directions form a right angle. Therefore, Scott discloses the “fins are formed at a right angle to a longitudinal direction of the pipes” as claimed.

The Examiner disagrees with applicants’ remarks with respect to Kadle for similar reasons stated above.

The Examiner disagrees with applicants’ remarks with respect to Hoshino et al. Figures 4 and 6-7 of Hoshino et al disclose cooling fins in the form of louvers 12a formed at a right angle to a longitudinal direction of the pipes 11. Inherently, the louvers 12a have a tilt angle.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

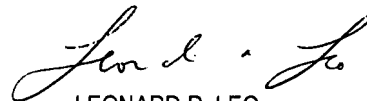
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard R. Leo whose telephone number is (571) 272-4916. The examiner can normally be reached on Monday thru Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834834. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LEONARD R. LEO
PRIMARY EXAMINER
ART UNIT 3744

July 23, 2007